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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,477	08/15/2003	Masakazu Kawai	20911-08172	3831

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EXAMINER

HOEKSTRA, JEFFREY GERBEN

ART UNIT	PAPER NUMBER
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3736

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/642,477	Applicant(s) KAWAI ET AL.	
	Examiner Jeffrey G. Hoekstra	Art Unit 3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Notice of Amendment

1. In response to the amendment filed on 04/20/2006, amended claims 4, 6, and 7 and amendments to the specification are acknowledged. The following new and reiterated grounds of rejection are set forth:

Information Disclosure Statement

2. The information disclosure statement(s) (IDS) submitted on 04/20/2006 and 06/26/2006 is/are acknowledged. The submission is in compliance with the provisions of 37 CFR 1.97 and 1.98. Accordingly, the examiner is considering the information disclosure statement(s).
3. The examiner notes one Foreign Patent Document and a multitude of the Non-Patent Literature documents did not appear to be submitted and thus not considered.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Tagami et al (US 5,808,433).

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6. For claims 1, 3 and 8, Tagami et al discloses a method of determining and applying moments (torques) to the joints of a biped walking system, comprising: (a) using sensors to determine which leg(s) is/are in contact with the ground (column 6 lines 12-24), (b) determining the attitude of the leg (column 19 lines 16-19), (c) capable of determining the vertical component of acceleration of the center of gravity of the body including the leg (column 21 lines 35-38), (d) determining the vertical component of a ground reaction force acting on the ground-striking member based on (a), (b), and (c) (column 20 lines 38-42), (e) determining the ground reaction force and its location relative to the body and ground-striking member (column 10 lines 13-21), (f) determining moments acting on joints using (d) and (e) without using the horizontal components of forces and accelerations acting on joints of the legs (column 1 lines 27-50), and (g) determining torque (or moments) to be applied based on (f) (column 17 lines 48-62).

7. For claim 2, Tagami et al discloses determining which legs are in contact with the ground based on the measured vertical component of acceleration

8. For claims 4 and 5, Tagami et al discloses determining the ground reaction force and its location relative to the body and ground-striking member based on the attitude of the leg and center of gravity of the body with a sensor (column 10 lines 13-21 and column 14 lines 48-57).

9. For claim 6, Tagami et al discloses determining the vertical component of acceleration of the center of gravity of the whole body including contributions from individual body members (column 21 lines 35-38) based on attitudes of body members.

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10. For claim 7, Tagami et al discloses determining the moments (torques) of leg portions (the knee and shin or likewise the knee and thigh) of a bipedal walking system using the vertical component of the ground reaction force and the acceleration of gravity without using the horizontal component of the ground reaction force (column 1 lines 27-50).

Response to Arguments

11. Applicant's arguments filed 04/20/2006 have been fully considered but they are not persuasive. Applicant argues that Tagami et al does not anticipate the instant case because (a) the claimed invention establishes moments acting around the joints of the leg without using a 6-dimensional force and torque sensor and (b) the reference does not disclose any responsiveness to a vertical component of a ground reaction force acting on a leg and including the attitude of the leg and vertical component of acceleration of the center of gravity of the whole body including the leg. This is not found persuasive and as broadly as structurally claimed Tagami et al anticipates the claimed invention.

12. In response to applicant's argument that the reference fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., without using a 6-dimensional force and torque sensor) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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13. In response to applicant's argument that the reference does not disclose any responsiveness to a vertical component of a ground reaction force acting on a leg and including the attitude of the leg and vertical component of acceleration of the center of gravity of the whole body including the leg the examiner disagrees. As aforementioned, Tagami discloses and teaches a method of determining in 6 dimensions the forces and moments to be applied to the joints of a leg based on the moments acting around the joints of the leg to control biped movement.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey G. Hoekstra whose telephone number is

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(571)272-7232. The examiner can normally be reached on Monday through Friday, 8:00 a.m. to 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max F. Hindenburg can be reached on (571)272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JGH

JH


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